

(19)日本国特許庁 (JP)

(12) 公開特許公報 (A)

(11)特許出願公開番号

特開2000-176139

(P2000-176139A)

(43)公開日 平成12年6月27日 (2000.6.27)

(51)Int.Cl.¹

A 63 F 7/02

識別記号

3 3 4
3 2 7
3 5 0

P I

A 63 F 7/02

3 3 4 2 C 0 8 8
3 2 7 Z
3 5 0 Z

マークコード(参考)

(21)出願番号

特願平10-375762

(22)出願日

平成10年12月16日 (1998.12.16)

審査請求 未請求 請求項の数1 FD (全 9 頁)

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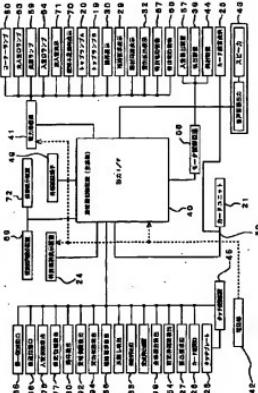
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株式会社高尾内F ターム(参考) 20388 AA36 AA42 BC45 CA27 CA28
CA31 EA23

(54)【発明の名称】 弾球遊技機

(57)【要約】

【課題】不正に「ふら下げ基盤」の取り付けが検出できるシステムを提供する。

【解決手段】前面枠開放検出と金枠開放検出とを遊技機制御装置に取り込んで管理コンピュータに送信をし、管理コンピュータは呼び出しスイッチ検出とで現状を判断して不正と判断されたら遊技店の店員に報知させるものである。さらに、前面枠開放検出と金枠開放検出を遊技機制御装置に取り込むと同時に補給要求、満杯検出及び遊技状況とで判断して、不正であれば遊技機の光音報知をして管理コンピュータに送信をし、さらに管理コンピュータが2重の管理をすることで厳重なる管理が可能になった。



〔特許請求の範囲〕

〔請求項1〕 誘導レールで囲まれた遊技部内に、複数の入賞装置と前部が遊技領域に臨みかつ後部が裏面側に配設された入賞球集合槽の背面より突出した状態で配設される回柄表示装置とを有する遊技盤と、該遊技盤を前面枠の遊技盤枠に対して着脱自在に構成された弾球遊技機において、

前記遊技盤枠にガラス枠開放検出装置と、前面枠開放検出装置とを設け、遊技機制御装置に入力可能とし、前記ガラス枠開放検出装置と前記前面枠開放検出装置は共に開放を検出した後設定時間後に管理装置に送信をし、前記弾球遊技機の報知手段で報知させることを特徴とする弾球遊技機。

〔発明の詳細な説明〕

〔0001〕

〔発明の属する技術分野〕 弹球遊技機における動作環境に関する。

〔0002〕

〔従来の技術〕 従来、弾球遊技機に代表されるパチンコ機およびアレジボーラー遊技機は、メンテナンスにおいて鍵操作で前面枠やガラス枠等をその鍵で右に回せばガラス枠が開放し、左に廻せば前面枠が開放させることができる。この内ガラス枠開放の検出は、内部に設けられるガラス枠開放検出装置での開放を検出し、前面枠の1側の一部に設置した飾りランプで報知するとともに管理コンピュータに送信をし、受信した管理コンピュータは開放回数等を記録している。またメーカーによっては金枠開放検出システムを設けていないものもあり店員の巡回で監視をしている。弾球遊技機の機種によっては特定領域に1球の入球検出で大当たりとなるものもあり、これらの監視は入手を増やして対応している。

〔0003〕

〔発明が解決しようとする課題〕 しかしながら、近年になってはガラス枠を開設しての不正入賞と言った1回限りの不正ではなく、通称「ふら下げ基盤」といった基盤を当該制御装置と各所を結ぶコネクタとの間に付け加える行為とか、当該遊技機と同じ処理をする基盤で不正ROMを搭載し、店員の目を盗んで交換をするといいたい事件も多くなり、ビデオカメラによる監視も遊技機設置島の中央や死角位置で数秒といった早業で交換をしてし、数人で賞品球を獲得するようなことも発生している。次に、前面枠やガラス枠を1日に何回開放したかを記録していくれば問題はないが遊技機の不調といった、例えばタンクレールに遊技球が時々吸込まれるとや遊技盤の入賞口命令に遊技球が時々引っかかることなど特定の遊技機に発生している上級の把握が困難であった。

〔0004〕

〔課題を解決するための手段とその効果〕 上記課題を解決するための手段として、請求項1に示す誘導レールで囲まれた遊技部内に、複数の入賞装置と前部が遊技領域

に臨みかつ後部が裏面側に配設された入賞球集合槽の背面より突出した状態で配設される回柄表示装置とを有する遊技盤と、該遊技盤を前面枠の遊技盤枠に対して着脱自在に構成された弾球遊技機において、前記遊技盤枠にガラス枠開放検出装置と、前面枠開放検出装置とを設け、遊技機制御装置に入力可能とし、前記ガラス枠開放検出装置と前記前面枠開放検出装置は共に開放を検出した後設定時間後に管理装置に送信をし、前記弾球遊技機の報知手段で報知させるとし、即座に全店員に詳細な内容を知らせることができるとし、どのようにそのシステムを設けたらよいかを実施例でその詳細を述べている。

〔0005〕 報道機関からの情報によると、遊技機に「ふら下げ基盤」と称する別基盤を遊技機の背面に設けられたる遊技機制御装置と、その遊技機制御装置と各部品への配線され接続するコネクタとの間に、この「ふら下げ基盤」を店舗の目を盗んで取り付けるといった不正行為がままあると報道されている。不正行為は、遊技店に設けられるビデオカメラ等で監視をしているにも拘らず、立ち見客がごく数人で周りを囲んで瞬時にこの「ふら下げ基盤」をセットしまう。瞬時に取り付けることは多くの訓練により可能としているので、その発見が困難であった。本発明の前面枠開放検出と、前面枠が開放されたときに出力される信号を他の信号と前面枠の開閉状態を把握が可能となり、その防犯効果が期待できるものであり、開放回数の記録により遊技機の診断に役立つとも可能となった。以上の効果を下記に述べる実施の形態で説明を一層明確にするものである。

〔0006〕

〔発明の実施の形態〕 本実施例は前面枠の開放検出をマーカロスチャップで構成をなしているが、設置される場所の関係上、遊技機内部に設けられるランプ等の光源による影響もないので光センサの設置もでき、前面枠をこじ開けるといったいたずらをされたとき遊技場の照明による影響をうけ、直ちに対処可能である。光センサは安価な上に機械式接点といったものが構造構成としていないので永久的に利用することができる。また光センサであれば高密度に設定して、電子ライターや携帯電話及び無線受信器といったノイズを受けやすくなればノイズによる不正対策も可能となる。

〔0007〕 前面枠や金枠を開放されたときの信号は単にオン、オフと言ったものであるから直接管理コンピュータにその信号を送ったとしても、故意または自然的に断線及び短絡が発生することがあり得るので、一旦制御装置に入力するとともに数パルスに加工して管理コンピュータに送信をすれば、その送信パルス数によってその動作内容が判別できるもので、このような構成が望ましい。このことは「ふら下げ基盤」の設置に対し電源を遮断するかコネクタを抜く等によりパルスの送信が不規則となるので容易に判別ができる。さらに、管理コンピュータの電源を遮断した場合に、前面枠や金枠を開放させ

たときの信号は、防犯管理センター等に送信をするとか、または前面枠や金枠を開放させたときの信号で、管理コンピュータの電源が自動投入するようにしてもらいたい。

【0008】前面枠や金枠は、実際の開放時には鍵を使用してシリンダー鍵を回転させてこのシリンダー鍵に双方向スイッチを組み込めば簡単に構成となる。ところが、遊技機設置場の当該遊技機の背面側より手でそれのスライダー門扉またはレバーを動かすことで簡単に開放できるのでシリンダー鍵に組み込む方法はあまり推奨できないが、手で開放できないようにカバーを付けて、さらに鍵で開放した場合はこのカバーが回転して容易に金枠が開放できるようになるのが望ましい。ただし、金枠を開放する場合はカバーを回転させる必要がない。シリンダー鍵にタッチセンサーとした方法を講じれば、このタッチ信号と各枠開放信号とでANDまたはORをとれば更に開放内容が把握可能となる。タッチセンサーの代わりに前述のシリンダー鍵に双方向スイッチを組み込む方法もさらに優れた効果を奏するものである。次に、本発明の実施例によると示した通り実施の形態をさらに明確にすべく具体的に説明する。

【0009】

【実施例】図1は、弾球遊技機に代表されるバチン機10の斜視正面図である。バチン機10は、外枠11とバチン機10の主要構成をなす前面枠12などで構成され、前面枠12は、外枠11の左側に設けられる上下のヒンジ14により軸支され、そのヒンジ14上下で共同により外枠11に対して閉閉可能になっており、その外枠11は上部に外枠2、下側に外枠23からなる箱状になっている。バチン機10の横位置に公知のブリーベードカードによる遊技球の貸し出しを制御するカードユニット21を備え、詳細を後述する図示しない有価証券の専用ブリーベードカードをカード挿入口34に挿入することができる。前面枠12には金枠18が前面枠12に対し閉閉可能に装着され、その金枠18には図示しない板ガラスが2枚組として相当面積で装着されている。金枠18には点線で図示する金枠開放出口99が内部に設けられている。

【0010】詳細を後述する前面枠12に保持される状態で遊技盤13が着脱自在に装填され、その遊技盤13前面側が前述の板ガラスで覆わるようになっている。前面枠12中央下部には、上皿15が、前面枠12に対して閉閉可能に装着されており、さらに上皿15の下方には下皿16が前面枠12に固定されるとともに下皿16の右側に発射ハンドル17が装着されている。発射ハンドル17には、タッチプレート28と発射停止鉗33が付けられタッチプレート28は回転可で運搬者が発射ハンドル17とこのタッチプレート28を手をかけてタッチプレート28を時計方向に廻せば遊技球が発射でき、そのままの発射状態で発射停止鉗33を押せば発射

の途中停止ができる。上皿15には図示しない遊技球の排出口が貸し出し用と販売用とが設けられ、詳細を後述する遊技球の貸し出しと販売品の払い出しが別々に排出されるような構成としている。

【0011】この上皿15には図示しない皿部に対して垂直にジュラコーン樹脂で製造されている球摺31が填められており、この球摺31は遊技球の流れ又は滑りをよくするために設けられ、従来のクロームメッキの鉄板では面が黒ずんでいても拘わらず滑りがないので遊技球の回転抵抗が大きく球詰まりの原因となっていたが、本上皿15はジュラコーン樹脂による構成で解消している。前面枠12の上部にはトップランプA20とトップランプB19が合体状態にして設けられ、トップランプA20が点滅すると運転率モードになっていることを遊技者に報知するもので、トップランプB19が点滅すると大当たりになったことを表示するものである。前面枠12略右端上方より補給要求表示29その下に満杯表示30とさらにその下に貸出表示32が設置されている。補給要求表示29や満杯表示30および貸出表示32は、あらかじめ満杯表示30は「下皿が満杯になっています」、補給要求表示29は「球不足係員を呼んで下さい」、貸出表示32は「有効残高です」といったような名前で合致した文字が書かれていて、内部灯を点灯させるとこれらの文字が明瞭に現れ、消灯すれば判読できないようになる。

【0012】なお、この補給要求表示29、満杯表示30および貸出表示32は、図示しない前面枠12と金枠18を開放させる施錠装置と、底面をアルミ補強板金などで一體的に構成されており、取り付けた場合は金枠の一部を覆うようにして强度を保つようにするように取り付けられている。詳細を図示しない説明ではあるが、前面枠12には鍵部が設けられその鍵部が前面枠12の裏側に突出するように鍵部の本体が設けられるとともに、この鍵部先端に2個のカムが取り付けられ、前面枠12側のスライダーと金枠18のスライダーとがそれぞれのカムに遊隙されている。鍵を鍵部に装着して右に回せば前面枠12が開放し、左に回せば金枠18が開放する。補給要求表示29、満杯表示30、貸出表示32は、前面枠12の裏側から店員がメンテナンスに使用するハーフ型のつまみの付いた俗称「つつき棒」で、案内穴から前面に向かって押し込むとそれぞれの表示板が外れて表示ランプが交換できるようになっている。

【0013】前面枠12の板ガラスを通して特別図柄表示装置24が点線で示すように設けられている。上皿15の右側上面にはカード残高表示25とカード精算鉗26、貸出要求鉗27が設けられ、前述したブリーベードカードをカード挿入口34に差し込むとカード残高表示25にブリーベードカードの残高が表示されその残高が0でなければ貸出要求鉗27を押すことにより貸出排出口より遊技球が排出され、さらにカード精算鉗26を押すと

プリベードカードがカード挿入口34より排出される。図2はバチンコ機1の背面側を示したもので、その背面側からの詳細を説明する。

【0014】バチンコ機1の右側に前述したカードユニット21が付けられユニットコード50により詳細を後述する機構制御装置97に連絡をしている。前面枠12の裏側に詳細を後述する遊技盤枠(以後ミドルプレート86と称する)が付けられ、そのミドルプレート86の左右上下に止着レバー88が設けられ、この止着レバー88は止着軸87で回動可能になっており、ミドルプレート86に遊技盤13をセッティングして、止着レバー88を廻せば遊技盤13を取り付けることができる。なおミドルプレート86に遊技盤13を止着する方法は、特願54-1-110983及び実願昭59-1-57897(共に公告済み)に詳細が開示されている。遊技盤13を取り付けた状態で機構盤35(セットボムと称される)が設置して、機構盤35に4個所設けられる機構盤止着レバー48でこの機構盤35を固定する。なお、機構盤止着レバー48は実開平5-39579で開示されているので詳細は述べない。

【0015】ミドルプレート86左上に図7で拡大表示する前面枠開放検出54が設けられ前面枠12を外枠から開放すると開放した旨の信号が送出される。外枠11の左上部に梁補強金具51が設置されており外枠11の側面と外枠架22とが堅密に保持され、さらに梁補強金具51に外枠ラッテ盤53が設けられている。前面枠12側には詳細を図示しないスライダーダンが設けられ、その内部に上下に設けられるスライダーラッタ部52を伴った外枠ラッタスライダ47が前述した外枠ラッタ盤53に引っかかる形で前面枠を上下共同して固定するとともに、図示しない鍵の操作をするとそれでのスライダーラッタ部52が外枠ラッタ盤53から外れて前面枠12を外枠11から開放することができる。

【0016】前面枠12の詳細を後述する機構盤35の上部にて賞品球および貸出用の遊技球を貯留する賞球タンク38が設置されている。賞球タンク38の右側には、バチンコ機1と外部(詳細を省略するホールコンピュータ)とを接続するための外部接続端子板49が設けられ、図示しないホールコンピュータに接続する端子と、詳細を図5で後述するアース端子55がそれぞれ設けられている。賞球タンク38の下側には、賞球タンク38から流出する遊技球を整列させながら誘導するタンクレール37が接続され、タンクレール37の右下流側は補給球通路96を介して、点線で示す払出装置38(詳細は後述する)に接続され、タンクレール37の下側には、賞球タンク38内の遊技球の有無を検出するための補給要求検出56が設置され、賞球タンク38に遊技球がなくなるとの補給要求検出56が外部接続端子板49を介して、ホールコンピュータに対し遊技球の補給要求をする。

【0017】入賞によって賞品球の払出が実行されると、賞球タンク36に保有する遊技球がタンクレール37と補給球通路96を経て払出装置38方向に流れる。なお、詳細を後述する入賞検出は、機構盤35右下方内部に点線で示す入賞検出装置57が内蔵されており、遊技盤13において入賞する全ての入賞球をこの入賞検出装置57がその入賞を検出して払出装置38を作動させている。タンクレール37の下側に特別回柄表示装置24と、その下に遊技機制御装置40が設けられている。

図1で述べた発射ハンドル17の後部にその回転軸に接続されて背面側で左下にタッチ変換装置45を伴った発射装置44が付けられ、その発射装置44の上部には機構制御装置97が設けられ、この機構制御装置97の筐体に電力増幅部41と電源部42とモータ制御回路58とが分割可能にそれぞれを一体的に収納されている。電力増幅部41はバチンコ機10に設けられる各種ランプやソレノイドの出力を行って、電源部42は遊技機制御装置40、特別回柄表示装置24及び電力増幅部41へ電力の供給をしている。

【0018】機構盤35の下部には排出口85が開口しており遊技球を発射して入賞し得なかった遊技球が図3及び図4に示すアウトロ84を経てこの排出口85から排出され球を省略した遊技機設置島内部へ取り込まれる。排出口85の左側に演球検出器39が設けられ入賞が多く統て、払出装置38から多量の賞品球が上皿15に払い出されて溢れると、図示しない溢れ通路から下皿16に溜め出される。更に払い出しが続くとこの溝底検出器39がその溝底を検出し、その後検出結果を遊技機制御装置40由来で外部接続端子板49からホールコンピュータに送信し、店員に無線で処置を促す指令を発して遊技客に遊技指導をさせるようにして、さらに遊技機制御装置40は機構制御装置97にも送信をして払い出しの停止や発射の停止、並びに報知手段を講じる構成となっている。機構盤35には、遊技盤13の背面に保護蓋46が設けられ内部に図4で詳細を述べる集合盤75が内蔵されている。保護蓋46は特許公報第2704596号と同等の構成で詳細を図示しない蝶番で開閉可能になってしまっており、この保護蓋46に遊技機制御装置40が着脱自在に付けられている。

【0019】遊技機制御装置40は、遊技盤13の遊技全体を制御するもので特に特別回柄表示装置24を制御するがその詳細は図6で後述する。機構盤35の略中央右に音声制御部43が設けられ音声制御と発声を行い、取り付け位置は図1に示す前面から見た上皿15の図示しない払い出し口に合わせて取り付けられている。音声制御部43の下方には点線で示す払出装置38が内蔵されその詳細を図8で後述する。図3は本実施例の遊技盤13の単体を前面から表示したものである。遊技盤13は略円形状に誘導レール74が付けられており下方先端部にレール保護部材73によって発射された遊技球の衝

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撃を緩和させ、たわみの防止するために設けられている。詳細を図示しないこのレール保護部材73を左に延伸させることにより衝撃をさらに緩和の効果を向上させようとしている。

【0020】誘導レール74の付け終端部に図示しない戻り玉防止装置が設けられている。遊技盤13の上部に図示しないタンク窓飾りが付けられ、このタンク窓飾りにはその左右に上方に窓球不足満杯表示70と窓入賞表示71とが併設してある。窓球不足満杯表示70と窓入賞表示71は、図1で述べた窓球不足満杯表示70が満杯表示3と補給要求表示2とをOR形式で同期表示するようにされ、満杯時は点灯し補給要求は点滅する構造であり、窓入賞表示71は入賞球による払い出し時に点灯するようになっている。遊技盤13の略中央に特別回柄表示装置24が設けられこの特別回柄表示装置24上部に保留表示装置72がグラス側に延出し屋根状に添設され、その下に普通入賞口61が開口している。

【0021】特別回柄表示装置24上部左右に風車ランプ59が設けられ、点灯または点滅させるようにされており、このうち点滅には点滅の種類、つまり点灯消灯の繰り返す時間の変化、例えば(以後、点灯消灯サイクル)の時間表現は本実施例で行っているものである)点灯と点滅をそれぞれ1秒として遊技状態を遊技客に報知するようになされている。本実施例では点滅サイクルの短い場合は大当たりが発生したとき、点灯消灯サイクルが点灯を0.5秒、消灯を0.3秒としていて、点灯を1秒で消灯を2秒とした点滅サイクルの長いときは詳細を述べない時短モード中であることを表示するようしている。

【0022】さらに点灯を瞬間的で0.2秒、消灯を長くする5秒の表示は大当たりが近くなったと要似たりの表示させ、遠のいたら停止するようになっている。また特別回柄表示装置24の回転方向を突動する点灯を短く点灯を1秒、消灯も1秒とサイクルを安定した感じのできるような表現をしている。消灯を1.0秒と長くして点灯を0.3秒と短くして繰り返す場合は、前面枠12または金枠18がその開放を検出しているときであって、この同期に従ってホールコンピュータにも送信をし、ホールコンピュータはその同期に従って信号を店員に例えば「ビッ」、「ビッ」、「ビッ」と送信をするようしている。店員は同一振音を見分けることができる所以対応が容易となる。ただし、図示しない遊技機設置部材に設けられる呼び出しランプを点灯させ、金枠18または前面枠12を開放して呼び出しランプを消灯させれば該送信信号を送信しない。このように風車ランプ59の表現的利用方法は数多く考えられる。特別回柄表示装置24の左右に通過式の普通始動口66が設けられている。

【0023】特別回柄表示装置24の左右で普通始動口66の外側にコーナーランプ60が設けられ、このコ

ーナーランプ60も前述の風車ランプ59と同様の動作表現をしている。特に時短モードのときは風車ランプ59の点滅方式が反転した状態で表示をするようにして、それ以外は同期させている。特別回柄表示装置24の下には、第1種始動口65としている普通電動役物68と、その下に特別電動役物67が設けられ、それぞれの左右に普通入賞口61が入賞口ランプ64と並んで取り付けられている。特別電動役物67の下にアウト口84が設けられ、その内容は図2で説明をしたとおりで発射された遊技球が各入賞口に入賞しえなかつたものがすべてこのアウト口84に流入する。

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【0024】特別電動役物67にはその下部に普通回柄表示装置69を、上部左右に普通入賞口61と、略中央に大入賞口62、その左右に大入賞口ランプ63とが併設されている。大入賞口62は大当たりが発生すると開閉を繰り返し入賞を多くする構成となっており、大入賞口ランプ63はその大入賞口62が開放すると点滅表示をし、普通入賞口61に遊技球が通過すると普通回柄表示装置69が遊技状況に応じた時間だけ変動をし、定められた確率値で当たれば普通電動役物68が開放する。この普通電動役物68は時短モードと一般的モードとでは開放時間が異なっており、時短モードの時は開放時間が多くてある。次に図4で前述した遊技盤13の背面の説明をすることとする。図4は、図3に示した取り付けられる部品の後部を示しており図3の番号と同一のものは、その説明を省略し、遊技盤13の特別回柄表示装置24を外した状態で特別回柄表示装置付窓78を表している。

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【0025】遊技盤13の背面には集合盤75が設けられている。集合盤75は普通入賞口61や大入賞口62に入賞した遊技球を集合させる役目を担って、普通入賞口61や第1種始動口65に入賞したものは各通路途中左右に設けられる普通入賞検出スイッチ82を通して、このうち第1種始動口65は、さらに途中に特別回柄作動検出スイッチ83を通過するような構成である。特別電動役物67の内部に特定領域検出77と入賞個数検出76とが設けられていて、大入賞口62に入賞した遊技球は、この特定領域検出77と入賞個数検出76を通じることにより、特定領域検出77は大当たりの確率を計算し、入賞個数検出76は入賞個数の制限をしている。本発明の一つとして特徴ある構成で普通入賞検出スイッチ82と特定領域検出77と入賞個数検出76とは、入球の通過順序を記憶し払い出しにおいて入賞順序に従つて払い出しが実行され、遊技客には何処に入賞したら何個出るかを容易に判別できるようしている。

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【0026】遊技盤13の下部には、図2で全体を示す機械盤3の下部に設けられる入賞処理部98が接続されており、各入賞口に入球した遊技球が集合盤75で寄せ集められ入賞処理部98の傾斜81(本実施例は傾斜を6度にしてある)から入賞検出装置57に誘導され

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る。遊技球を集合させ込みもなく1列に整列させることは、非常に困難で前述した傾斜角度が大きく影響を及ぼすこととなる。本実施例では8度の傾斜が設けてあるが、この角度をこれ以上になると込み込み現象が生じて、4度未満にするとこれも流れスピードが落ちて込み込み現象が生じる。入賞処理部9には前述した入賞検出装置5・7がある。その入賞検出装置5・7は入賞検出モータ7と入賞検出スイッチ80とが設けられている。バーチャル機10に電力が通電されると入賞検出モータ7は反時計方向に回転をする。傾斜81から誘導された遊技球が入賞検出モータ7の90°の軸に接続される図示しないスプロケットに装填され回転途中において入賞検出スイッチ80が遊技球を検出すると払出が実行される。遊技球を装填したスプロケットは、図示しない入賞球排出位置に停止して装填されている遊技球を入賞球排出槽へ排出し、払出が終了すると再びスプロケットは回転を再会する。

【0027】上記の構成は、従来のスイッチで入賞球を検出して、さらに検出信号に基づいてソレノイドを作動させ入賞球を排出させるとしたもので、検出結果から払出実行とそれに続く入賞球の排出と時間がかかり、傾斜81を4度位にしないとアヒル構成の排出装置は玉圧が掛かって動作不良を引き起こす。といった欠点があったが、本装置は回転体であるから玉圧の影響を受け難く高速に入賞検出処理ができるといった優れた効果が生まれる。図5は遊技盤13を取り付けるミドルプレート86で、図2において説明できぬ内部の詳細を説明するために遊技盤13と機構盤35を外した状態を示したものである。ミドルプレート86は窓枠状に構成され、遊技盤13を矢印86a～86gに示すように挿入して止着レバー88を止着軸87の回転軸として回転可能であるから遊技盤13をセットして止着レバー88を図に示した状態にと定めできる。

【0028】発射装置44を取り付ける場合は、ミドルプレート86に発射モータ止着位置A89と発射モータ止着位置B90があり、発射装置44の詳細を図示しない前面枠12に取付穴部に入れて取付モータ止着位置A89と発射モータ止着位置B90とを接続するように押し込めば取付位置が固定され、さらに図示しないビスで発射装置44を前面枠12に固定せることができる。このようにするとバーチャル機10に発射装置44を付ける場合、従来は技術者の手によって付けられていたものが自動設置が可能となる。図1に点線で示した金枠開放検出99の背面で内部にマイクロスイッチが入れられ金枠18を閉鎖すると作動するようになっている。

【0029】図6は本発明に係る電気系統を示したものである。図6は各部品接続状況を示す回路図で前述したものに対応しており、特定部分を除き詳細を省略する。金枠開放検出99と前面枠開放検出54は共に遊技機制御装置に接続されており、入賞個数検出76、特

定領域検出、満杯検出器39及び第1種始動口65等の入賞検出に係わるトラブルが発生したとき、金枠開放検出99と前面枠開放検出54とがその処置の為に開放したことから容易に判断できるようになる。音声制御部43はCPUを伴ったサウンドジェネレータまたはトーンジェネレータが内蔵されスピーカーと一緒に設けられている。その動作方法は払出頭人が特開平9-202190で、その詳細を述べている。図7は、前面枠開放検出54の部分斜視図で図2と図5及び図6に詳細を示してその内容を述べたので、構造が判断できるように図示した。ただ、構造が上部が外枠線に押されて前面枠を押し下げるような形になり、外枠ベースと外枠梁22とで固定されるのでこじ開けができないといった長所を備えている。

【0030】図8は、図2に点線で示した払出装置38の構造斜視図である。払出装置38は補給球通路96に接続される図示しない内部にスプロケットが設けられており、このスプロケットは払出モータ91に接続されている。スプロケットの外周部に賞球個数検出92と貸出個数検出94が設けられ、それぞれの側面に、賞球個数検出92には賞球通路93と貸出個数検出94には貸出球通路95が設けられるとともにその流出先は上皿15に接続されている。動作はモータの回転方向で賞球の払い出しと貸し出し球の排出が1個の装置で可能としていることが特徴となっている。以上、実施例に従って、本発明の実施の形態について説明したが、本発明はこのような実施例に限定されるものではなく、本発明の要旨を逸脱しない範囲で様々な実施できることは言うまでもない。

30 【図面の簡単な説明】

【図1】は、実施例のバーチャル機の正面斜視図である。【図2】は、図1に示すバーチャル機の背面図である。【図3】は、バーチャル機に装填される遊技盤の正面図である。

【図4】は、遊技盤の平面図で入賞球の流れと機能を説明する図である。

【図5】は、遊技盤を止着するミドルプレートを示した図である。

【図6】は、バーチャル機の電気系統を示した図である。【図7】は、本発明の前面枠開放検出の構造を示した詳細図である。

【図8】は、機構盤に内蔵される払出装置を示した図である。

【符号の説明】

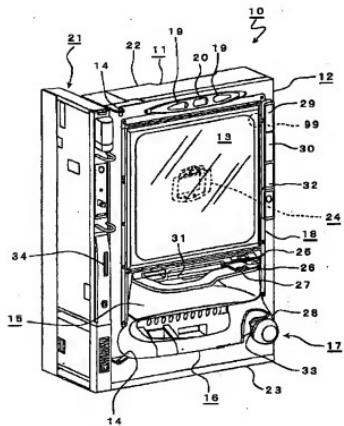
10…バーチャル機、11…外枠、12…前面枠、13…遊技盤、14…ヒンジ、15…上皿、16…下皿、17…発射ハンドル、18…金枠、19…トップランプB、20…トップランプA、21…カードユニット、22…外枠梁、23…外枠枠、24…特別回柄表示装置、25…カード残高表示、26…カード精算鉤、27…貸出要

求鉤、28…タッチプレート、29…補給要求表示、30…満杯表示、31…球置、32…貸出表示、33…発射停止鉤、34…カード挿入口、35…機構盤、36…賞球タンク、37…タンクケーブル、38…払出装置、39…満杯検出器、40…遊技機制御装置、41…電力增幅部、42…電源部、43…音声制御部、44…発射装置、45…タッチ变换装置、46…保護蓋、47…外枠ラッチャスライダー、48…機構盤止着レバー、49…外部接触端子板、50…ニットコード、51…梁補強金具、52…スライダーラッチャ部、53…外枠ラッチャ盤、54…前面枠開放検出、55…アース端子、56…補給要求検出、57…入賞検出装置、58…モーター制御回路、59…風車ランプ、60…コーナーランプ、61…普通入賞口、62…大入賞口、63…大入賞口ランプ、64…入賞口ランプ、65…第1種始動口、66…普通*

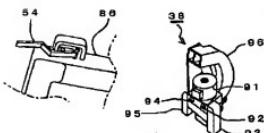
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*始動口、67…特別電動役物、68…普通電動役物、69…普通圓柄表示該、70…窓球不足満杯表示、71…窓入賞表示、72…保留表示装置、73…レール保証部材、74…誘導レール、75…集合盤、76…入賞個数検出、77…特定領域検出、78…特別圓柄表示該取付窓、79…入賞検出モータ、80…入賞検出スイッチ、81…傾斜、82…普通入賞検出スイッチ、83…特別圓柄作動検出スイッチ、84…アウト口、85…排出口、86…ミドルプレート、87…止着輪、88…止着レバー、89…発射モータ止着位置A、90…発射モータ止着位置B、91…払出モータ、92…賞球個数検出、93…賞球通路、94…貸出個数検出、95…貸出球通路、96…補給球通路、97…機構制御装置、98…入賞処理部、99…金枠開放検出。

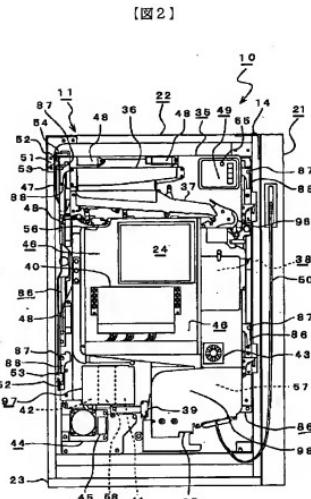
【図1】



【図7】

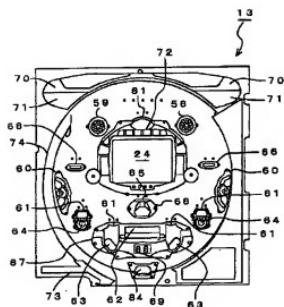


【図8】

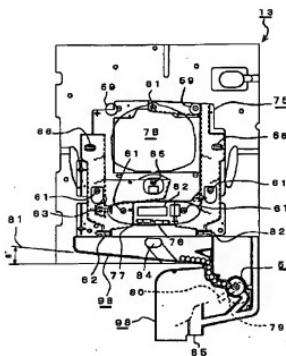


【図2】

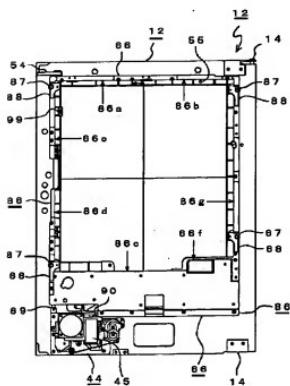
〔四三〕



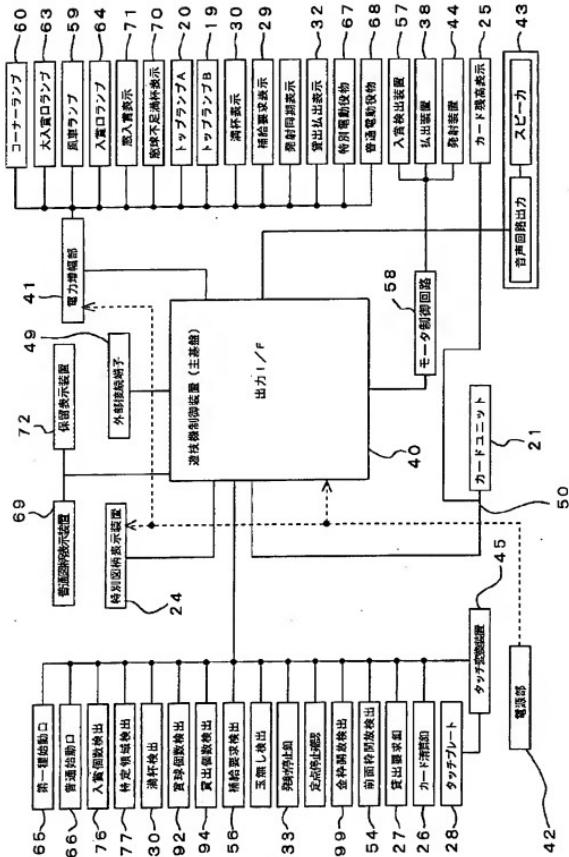
[图4]



〔圖5〕



〔图6〕



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Bibliography

(19) [Country of Issue] Japan Patent Office (JP)

(12) [Official Gazette Type] Open patent official report (A)

(11) [Publication No.] JP,2000-176139,A (P2000-176139A)

(43) [Date of Publication] June 27, Heisei 12 (2000. 6.27)

(54) [Title of the Invention] Pinball machine

(51) [The 7th edition of International Patent Classification]

A63F 7/02 334

327

350

[FI]

A63F 7/02 334

327 Z

350 Z

[Request for Examination] Un-asking.

[The number of claims] 1

[Mode of Application] FD

[Number of Pages] 9

(21) [Filing Number] Japanese Patent Application No. 10-375762

(22) [Filing Date] December 16, Heisei 10 (1998. 12.16)

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[Theme code (reference)]

2C088

[F term (reference)]
2C088 AA36 AA42 BC45 CA27 CA28 CA31 EA23

[Translation done.]

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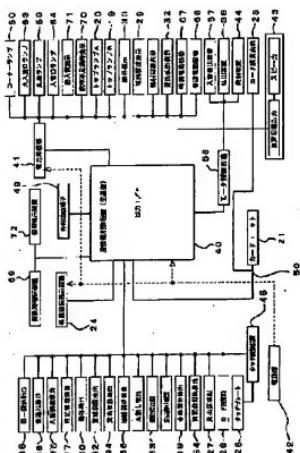
Summary

(57) [Abstract]

[Technical problem] inaccurate -- "— the system which hangs and can detect installation of base" is offered

[Means for Solution] Front frame opening detection and metal-flask opening detection are incorporated to a game machine control unit, and it transmits to a management computer, and when a management computer calls, judges the present condition by switch detection and is judged to be inaccurate, the salesclerk of a game store is made to report it. Furthermore, while incorporating front frame opening detection and metal-flask opening detection to the game machine control unit, it judged in a supply demand, full detection, and the game situation, and when inaccurate, **** information of a game machine was carried out, it transmitted to the management computer, and severe management was attained by carrying out management with a still more nearly double management computer.

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CLAIMS

[Claim(s)]

[Claim 1] The game board which has the pattern display arranged in the state where it projected from the tooth back of close awarded-balls ***** where two or more winning-a-prize equipment and front part attended the game field, and the rear was arranged in the game circles surrounded by the guidance rail at the rear-face side, In the pinball machine constituted free [attachment and detachment] to game **** of a front frame in this game board Glass-holder opening detection equipment and

front frame opening detection equipment are formed in the aforementioned game ***. It is the pinball machine characterized by transmitting to management equipment after the setup time if an input is made possible at a game machine control unit and both the aforementioned glass-holder opening detection equipment and the aforementioned front frame opening detection equipment detect opening, and making the information means of the aforementioned pinball machine report.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] It is **** to the operating environment in a pinball machine.

[0002]

[Description of the Prior Art] If a front frame, a glass holder, etc. are turned to the right with the key by key operation in a maintenance, a glass holder will open wide the pachinko machine and arrangement ball game machine which are represented by the pinball machine, and if it turns to the left, a front frame can make them open wide conventionally. Detection of this inner glass-holder opening detects the opening with the glass-holder opening detection equipment formed in the interior, while it decorates and a lamp reports, it transmits to a management computer and the management computer which was installed in the part by the side of one of a front frame and which received is recording the number of times of opening etc. Moreover, there are some which have not prepared the metal-flask opening detection system for some makers, and it is supervising by a salesclerk's round. Depending on the model of pinball machine, some which are becoming it a great success by ON sphere detection of one sphere are in a specific field, a help is increased for these surveillance and it is coped with.

[0003]

[Problem(s) to be Solved by the Invention] However, it is not the injustice only for [which was called unjust winning a prize which opens a glass holder wide if recent years come] 1 time. common-name "— the act which hangs and adds the base base" between the connectors which connect a control unit and every place concerned — if inaccurate ROM is carried at the base which carries out the same processing as the game machine concerned and it exchanges by stealing a salesclerk's eyes — **** — the incident also increased, by the quick work of several seconds, the surveillance by the video camera also exchanged, and was carried out in the center and dead angle position of a game machine installation island, and what gains a prize sphere by several persons has occurred next, for example, a tank rail called the bad condition of a game machine although it is satisfactory, if it is recording how many times the front frame and the glass holder were opened on the 1st — a game sphere — sometimes — ***** — grasp of the upper class generated in specific game machines — a game sphere is sometimes caught in winning-a-prize ***** of things or the game board — was difficult [0004]

[Means for Solving the Problem and its Effect] To the game circles surrounded by the guidance rail shown in a claim 1 as the above-mentioned The means for solving a technical problem The game board which has the pattern display arranged in the state where it projected from the tooth back of close awarded-balls ***** where two or more winning—a-prize equipment and anterior part attended the game field, and the posterior part was arranged in the rear-face side, In the pinball machine constituted free [attachment and detachment] to game *** of a front frame in this game board Glass-holder opening detection equipment and front frame opening detection equipment are formed in the aforementioned game ****. Make an input possible at a game machine control unit, and both the aforementioned glass-holder opening detection equipment and the aforementioned front frame opening detection equipment will transmit to management equipment after the setup time, if opening is detected. It carried out to making the information means of the aforementioned pinball machine report, and presupposed that it is possible to tell all salesclerks about a detailed content immediately, and the detail is given for how the system should be formed in the example.

[0005] according to the information from the press — a game machine — "— between the game machine control unit in which another base which is hung and is called base" is prepared at the tooth back of a game machine, and the game machine control unit and the connectors to each part article which it wires and connect — this "— the malfeasance of hanging, stealing a salesclerk's eyes and attaching base" — as — it is — ** — reporting — having — **** . although the malfeasance is supervising with the video camera prepared in a game store — a person standing — several profit — the surroundings — surrounding — an instant — this "— hanging — base" — set ***** Since [with many training] it was possible, the discovery was difficult for attaching in an instant. Grasp became

possible about the count-of-the-votes state of a front frame by other signals, the crime prevention effect can expect that the signal outputted when a front frame is opened wide is front frame opening detection of this invention, and it became possible that it is also useful to a diagnosis of a game machine with record of the number of times of opening. Explanation is further clarified with the form of the operation which describes the above effect below.

[0006]

[Embodiments of the Invention] Although this example is constituting open detection of a front frame from a microswitch, since there is also no influence by the light sources, such as a lamp formed on the relation of the place installed and in the interior of a game opportunity, it can also perform installation of a photosensor, when the mischief of wrenching a front frame open is carried out, it can receive the influence by the lighting of an amusement center, and can cope with it immediately. Since a thing called a mechanical contact has not considered as structure composition in a cheap top, a photosensor can be used semipermanently. Moreover, if it is a photosensor, it will be set as high sensitivity, and if noises, such as an electronic writer, a cellular phone, and a radio transmitter, are made easy to receive, the unjust cure by the noise will also become possible.

[0007] if it processes a number pulse and it transmits to a management computer while once inputting it into a control unit, since the signal at the time of making a front frame metallurgy frame open wide is only called ON and OFF and it may have the thing which sent the signal to the direct management computer and which an open circuit and a short circuit generate intentionally or naturally, even if it carries out, it can distinguish the activity with the number of transmitted pulses, and is desirable [of such composition] this — “— since transmission of a pulse becomes irregular by hanging, and intercepting a power supply to installation of base”, or extracting a connector etc., distinction can be done easily Furthermore, when the power supply of a management computer is intercepted, the signal at the time of making a front frame metallurgy frame open wide is a signal at the time of transmitting to a crime prevention management pin center,large etc., or making a front frame metallurgy frame open wide, and you may make it the power supply of a management computer supply it automatically.

[0008] Since a front frame metallurgy frame rotates cylinder lock using a key at the time of actual opening, if a bidirectional switch is built into this cylinder lock, it will serve as easy composition. However, although the method built into cylinder lock can seldom be recommended since it can open easily by moving each slider board or lever by hand from the tooth-back side of the game machine of a game machine installation island concerned, when covering is attached so that it cannot open by hand, and it opens wide with a key further, it is desirable for this covering to rotate and to enable it to open a metal flask easily. However, when opening a metal flask, it is not necessary to rotate covering. If the method made into the touch sensor is devised to cylinder lock and AND or OR will be taken by this touch signal and each

**** opening signal, grasp of open contents will still be attained. The effect which was further excellent also in the method of incorporating a bidirectional switch at the above-mentioned cylinder lock instead of the touch sensor is done so. Next, it explains concretely that the form of implementation of invention mentioned above according to the example of this invention should be made still clearer.

[0009]

[Example] Drawing 1 is the tropia front view of the pachinko machine 10 represented by the pinball machine. The pachinko machine 10 consists of an outer frame 11 and a front frame 12 which can make the main composition of the pachinko machine 10, the front frame 12 is supported to revolve by the hinge 14 of the upper and lower sides prepared in the left-hand side of an outer frame 11, opening and closing have become possible to the outer frame 11 by cooperation by the hinge 14 upper and lower sides, and the outer frame 11 has box-like [which becomes the upper part from the outer frame base 23 at the outer frame beam 22 and the bottom]. The horizontal position of the pachinko machine 10 can be equipped with the card unit 21 which controls the loan of the game sphere by the well-known pulley PEDO card, and an exclusive pulley PEDO card with the valuable value which mentions a detail later and which is not illustrated can be inserted in a card slot 34. The front frame 12 is equipped with a metal flask 18 possible [opening and closing] to the front frame 12, and the metal flask 18 is equipped with the sheet glass which is not illustrated at the considerable interval as two pieces. The metal-flask opening detection 99 illustrated by the dotted line to a metal flask 18 is formed in the interior.

[0010] It is loaded with the game board 13 free [attachment and detachment] in the state where it is held at the front frame 12 which mentions a detail later, and is made to be covered with the sheet glass of the above-mentioned [the front-face side of game board 13]. While the front frame 12 central lower part is equipped with the upper pan 15 possible [opening and closing] to the front frame 12 and the lower pan 16 fixes in the front frame 12 under the upper pan 15 further, the right-hand side of the lower pan 16 is equipped with the discharge handle 17. It can rotate, the touch plate 28 and the discharge stop button 33 are attached, if a game person turns the touch plate 28 to them clockwise, applying a hand to the discharge handle 17 and this touch plate 28, a game sphere can be discharged, and if the discharge stop button 33 is pushed in the state of discharge as it is, a halt of the touch plate 28 will be possible for the discharge handle 17 in the middle of discharge. The exhaust port of the game sphere which is not illustrated lends out to the upper pan 15, business and the object for prize expenditure are prepared, and it is considering as composition by which the loan of a game sphere and the expenditure of a prize sphere which mention a detail later are discharged separately.

[0011] Besides **** 31 currently perpendicularly manufactured by the Duracon resin to the tray which is not illustrated was inserted in the pan 15, in order that this **** 31 might improve the flow or slipping of a game sphere, it was prepared, and

although the rotational resistance of a game sphere caused sphere plugging greatly in the griddle of the conventional chromium plating since there was no slipping, although the field was precise, ***** 15 is canceled with the composition by the Duracon resin. If the top lamp A20 and the top lamp B19 are formed in the upper part of the front frame 12 by carrying out at a coalesce state, it reports to a game person that it is change probability mode if the top lamp A20 blinks, and the top lamp B19 blinks, it will indicate that it was becoming it a great success. the front frame 12 abbreviation right end upper part — the supply demand display 29 — the loan display 32 is further installed under it with the full display 30 in the bottom of it Beforehand, in "the bottom pan has filled" and the supply demand display 29, if the supply demand display 29, the full display 30, and the loan display 32 make an internal LGT turn on, the character agreed is written to each content like "being the effective balance", and these characters appear clearly, and the full display 30 can read [display / display / loan / 32 / "please call a sphere insufficient official in charge" and] no longer, if the light is put out.

[0012] In addition, the locking equipment which makes the front frame 12 which is not illustrated and a metal flask 18 open wide, and when it consists of aluminum back-up-plate gold in one and a base is attached, this supply demand display 29, the full display 30, and the loan display 32 are attached so that intensity may be maintained, as a part of metal flask is covered. Although it is the explanation which does not illustrate a detail, while the main part of a key part is prepared so that a key part may be prepared in the front frame 12 and the key part may project in the background of the front frame 12, two cams were attached at this nose of cam of a key part, and the slider by the side of the front frame 12 and the slider of a metal flask 181 have fitted loosely into each cam. If a key part is loaded with a key and it turns to the right, the front frame 12 will open wide, and if it turns to the left, a metal flask 18 will open common name "to which the heart type tongue with which a salesclerk uses the supply demand display 29, the full display 30, and the loan display 32 for a maintenance from the background of the front frame 12 was attached — it pokes, and it is rod", and if it pushes in toward a front face from a guidance hole, each plotting board separates and display lamps can be exchanged

[0013] It is prepared, as the sheet glass of the front frame 12 is spaced and the pattern display 24 shows by the dotted line specially. If the balance of a pulley PEDO card is displayed on the card balance display 25, a game sphere will be discharged from a loan exhaust port by pushing loan ***** 27 if the balance is not 0, if the card balance display 25, card ***** 26, and loan ***** 27 are formed in the right-hand side upper surface of the upper pan 15 and the pulley PEDO card mentioned above is inserted in a card slot 34, and card ***** 26 is pushed further, a pulley PEDO card will be discharged from a card slot 34. Drawing 2 is what showed the tooth-back side of the pachinko machine 10, and explains the detail from the tooth-back side.

[0014] The mechanism control unit 97 which the card unit 21 mentioned above on

the right-hand side of the pachinko machine 10 is attached, and mentions a detail later in unit code 50 is connected with. Game **** (the middle plate 86 is called henceforth) which mentions a detail later is attached to the background of the front frame 12, the firm attachment lever 88 is formed in the right-and-left upper and lower sides of the middle plate 86, rotation of this firm attachment lever 88 is attained with the firm attachment shaft 87, the game board 13 is set to the middle plate 86, and if the firm attachment lever 88 is turned, the game board 13 can be attached. In addition, as for the method of attaching the game board 13 firmly to the middle plate 86, Japanese Patent Application No. 54-110983 and the application-for-a-utility-model-patent detail are indicated [Showa 59 to 157897 (finishing / both public notices /)]. Where the game board 13 is attached, the mechanism board 35 (called the set board) installs, and this mechanism board 35 is fixed with the mechanism board firm attachment lever 48 prepared in the mechanism board 35 four places. In addition, since it is indicated by JP,5-39579,U, the mechanism board firm attachment lever 48 is not described for details.

[0015] The signal of the purport wide opened when the front frame opening detection 54 which carries out an enlarged display by drawing 7 was formed in the middle plate 86 upper left and the front frame 12 was opened from the outer frame is outputted. The beam reinforcement metallic ornaments 51 are fixed to the upper left section of an outer frame 11, the side and the outer frame beam 22 of an outer frame 11 are held strongly, and the outer frame latch board 53 is further formed in the beam reinforcement metallic ornaments 51. While carrying out vertical cooperation of the front frame and fixing in the form caught in the outer frame latch board 53 which the outer frame latch slider 47 accompanied by the slider latch section 52 which the slider lock which does not illustrate a detail is formed in the front frame 12 side, and is prepared in the interior up and down mentioned above If the key which is not illustrated is operated, each slider latch section 52 separates from the outer frame latch board 53, and can open the front frame 12 from an outer frame 11.

[0016] The awarded-balls tank 36 which stores a prize sphere and the game sphere for a loan is installed in the upper part of the mechanism board 35 which mentions the detail of the front frame 12 later. The terminal which the external connection terminal assembly 49 for connecting the pachinko machine 10 and the exterior (hole computer which omits a detail) is formed, and connects to the hole computer which is not illustrated, and the grounding terminal 55 which mentions a detail later by drawing 5 are formed next to the awarded-balls tank 36, respectively. The tank rail 37 guided while aligning the game sphere which flows out of the awarded-balls tank 36 with the awarded-balls tank 36 down side is connected, and the lower right style side of the tank rail 37 minds the supply sphere path 96. It connects with the expenditure equipment 38 (it mentions later for details) shown by the dotted line. to the tank rail 37 down side The supply demand detection 56 for detecting the existence of the game sphere in the awarded-balls tank 36 is installed, and if a game

sphere is lost on the awarded-balls tank 36, this supply demand detection 56 will carry out the supply demand of a game sphere to a hole computer through the external connection terminal assembly 49.

[0017] If expenditure of a prize sphere is performed by winning a prize, the game sphere held on the awarded-balls tank 36 will flow in the expenditure equipment 38 direction through the tank rail 37 and the supply sphere path 96. In addition, the winning-a-prize detection equipment 57 shown by the dotted line is built in the interior of the mechanism board 35 lower-right direction, this winning-a-prize detection equipment 57 detects the winning a prize for all the winning-a-prize spheres that win a prize in the game board 13, and the winning-a-prize detection which mentions a detail later operates expenditure equipment 38. The game machine control unit 40 is specially formed in the pattern display 24 and the bottom of it at the tank rail 37 bottom. It connects with the axis of rotation at the posterior part of the discharge handle 17 stated by drawing 1, the launcher 44 accompanied by the touch inverter 45 is attached to the lower left by the tooth-back side, the mechanism control unit 97 is formed in the upper part of the launcher 44, and the power amplification section 41, the power supply section 42, and the motor control circuit 58 are contained by the case of this mechanism control unit 97 in one in each possible [division]. The power amplification section 41 performs the output of the various lamps and solenoid which are prepared in the pachinko machine 10, and the power supply section 42 supplies power to the game machine control unit 40, the special pattern display 24, and the power amplification section 41.

[0018] The game sphere which the exhaust port 85 is carrying out opening to the lower part of the mechanism board 35, discharges a game sphere, and could not win a prize is incorporated inside [which was discharged from this exhaust port 85 through the out mouth 84 shown in drawing 3 and drawing 4 , and omitted drawing] a game machine installation island. By forming the full detector 39 in the left-hand side of an exhaust port 85, if a lot of prize sphere from expenditure equipment 38 with much [then] winning a prize pays out the upper pan 15 and it overflows, it will illustrate, twist and overflow, and it is drawn from a path by the lower pan 16.

Furthermore, if expenditure continues, this full detector 39 will detect the *****, and the detection result is transmitted to a hole computer from the external connection terminal assembly 49 by game machine control unit 40 course. As the instructions to which disposal is demanded from a salesclerk on radio are emitted and a game visitor is made to do game instruction, the game machine control unit 40 is further considered as the composition which transmits also to the mechanism control unit 97 and provides the stop of expenditure, a halt of discharge, and an information means. The set board 75 which the protection lid 46 is formed in the tooth back of the game board 13, and gives detail to the interior by drawing 4 is built in the mechanism board 35. Opening and closing of the protection lid 46 are attained with composition equivalent to the patent official report No. 2704596 on the ginglymus which does not illustrate a detail, and the game machine control unit 40 is attached

to this protection lid 46 free [attachment and detachment].

[0019] Although the game machine control unit 40 controls the whole game of the game board 13 and controls the pattern display 24 specially especially, it mentions the detail later by drawing 6 . The voice-control section 43 is formed in the abbreviation central right of the mechanism board 35, it utters with a voice control, and the installation position is attached according to the expenditure mouth which the upper pan 15 seen from the front face shown in drawing 1 does not illustrate. The expenditure equipment 38 shown by the dotted line under the voice-control section 43 is built in, and the detail is later mentioned by drawing 8 . Drawing 3 displays the simple substance of the game board 13 of this example from a front face. the guidance rail 74 attaches the game board 13 to an approximate circle configuration — having — **** — a lower part point — rail protection — the shock of the game sphere discharged by the member 73 is made to ease, and it is prepared in order that a deflection may prevent this rail protection that does not illustrate a detail — it is made to have raised the effect of further relief of a shock by making a member 73 extend on the left

[0020] The guidance rail 74 attaches, it illustrates, twists and returns to a trailer, and the ball arrester is prepared. The tank aperture trim which is not illustrated in the upper part of the game board 13 is attached, the **** shortage full display 70 and the aperture winning-a-prize display 71 annex to this tank aperture trim, and the top is established in it at the right and left. The **** shortage full display 70 and the aperture winning-a-prize display 71 switch on the light at the time of the expenditure the **** shortage full display 70 stated at drawing 1 indicates [expenditure] the full display 30 and the supply demand display 29 by synchronous in OR form are made to be carried out, switch on the light at the time of full, a supply demand is the blinking composition, and according [the aperture winning-a-prize display 71] to a winning-a-prize sphere. The pattern display 24 is specially formed in the center of abbreviation of the game board 13, and the hold display 72 extends in this special pattern display 24 upper part at a glass side, it is installed in the shape of a roof, and the winning-a-prize mouth 61 is usually carrying out opening to the heavens.

[0021] It is change of time to form the wind-mill lamp 59 in pattern display 24 up right and left specially, and make it make it switch [the light] on or blink, among these for the kind of blink, i.e., lighting putting out lights, repeat for blink, for example, (time expression of lighting blink cycle is carrying out at this example after that) lighting and blink are carried out as 1 second, respectively, and the game visitor is made for a game state to be reported. When a blink cycle is short and the blink cycle which the lighting blink cycle lights up it for 0.5 seconds, lights up putting out lights 0.3 seconds in the time of great success occurring, and made putting out lights 2 seconds for lighting in 1 second is long, it is made to indicate that it is among the reduction-of-working-hours mode in which detail is not given in this example.

[0022] It is still more nearly momentary in lighting, and if great success makes it display in false that it became closely and gets away, it is made to stop the display for 5 seconds which lengthens putting out lights for 0.2 seconds. Moreover, if the pattern of the pattern display 24 is changed specially, expression to which the sensibility stabilized [lighting] by 1 second and putting out lights in 1 second and the cycle comes out of lighting short is carried out. Putting out lights is lengthened with 10 seconds, when shortening lighting with 0.3 seconds and repeating it, according to this synchronization, it transmits also to a hole computer, and the hole computer is made to be a time of the front frame 12 or the metal flask 18 having detected the opening, and to carry out transmission for a signal to a salesclerk with "PITSU", "PITSU", and "PITSU" according to the synchronization. Since a salesclerk can recognize the same *****, it becomes easy to cope with him. However, the call lamp formed in the game machine installation island which is not illustrated is made to turn on, and an open signal will not be transmitted, if a metal flask 18 or the front frame 12 is opened wide and called and a lamp is made to switch off. Thus, many expression-use methods of the wind-mill lamp 59 are considered. The common starting mouth 66 of a passage formula is specially formed in right and left of the pattern display 24.

[0023] The corner lamp 60 is usually specially formed in the outside of the starting mouth 66 by right and left of the pattern display 24, and this corner lamp 60 is also carrying out the same expression of operation as the above-mentioned wind-mill lamp 59. After the blink method of the wind-mill lamp 59 has been reversed, as it displays especially at the time of reduction-of-working-hours mode, it is synchronized except it. Specially, with the common electric accessory 68 used as the 1st-sort starting mouth 65, the electric accessory 67 is specially formed in the bottom of it, and the winning-a-prize mouth 61 is attached in the bottom of the pattern display 24 usually with [winning-a-prize mouth lamp 64] each right and left. The out mouth 84 is specially formed in the bottom of the electric accessory 67, and all the things by which the game sphere which the contents are as drawing 2 having explained, and was discharged could not win a prize of each winning-a-prize mouth flow into this out mouth 84.

[0024] specially --- the electric accessory 67 --- in pattern ***** 69, the large winning-a-prize mouth lamp 63 is put side by side in the lower part at up right and left, and is usually put side by side to the large winning-a-prize mouth 62 and its right and left in the winning-a-prize mouth 61 and the center of abbreviation If it hits at the probability value defined by changing only in the time [***** / pattern / 69] usually corresponding to the game situation when it indicated by blink when it has composition which will repeat opening and closing if great success generates the large winning-a-prize mouth 62, and makes / many / winning a prize and the large winning-a-prize mouth 62 opened the large winning-a-prize mouth lamp 63, and the game sphere usually passed to the winning-a-prize mouth 61, the electric accessory 68 will usually open. Usually, when [this] released times differ in reduction-of-

working-hours mode and the general mode and the electric accessory 68 is reduction-of-working-hours mode, the released time is made [many]. Next, suppose that the tooth back of the game board 13 mentioned above in drawing 4 is explained. Drawing 4 shows the posterior part of the parts which were shown in drawing 3 and which are attached, and the same thing as the number of drawing 3 omits the explanation, and where [of the game board 13] the pattern display 24 is removed specially, it expresses pattern display ***** 78 specially.

[0025] The set board 75 is formed in the tooth back of the game board 13. What the set board 75 bore the duty which gathers the game sphere which usually carried out the ON sphere to the winning-a-prize mouth 61 or the large winning-a-prize mouth 62, and usually carried out the ON sphere to the winning-a-prize mouth 61 or the 1st-sort starting mouth 65 is composition prepared in right and left in the middle of each path that the winning-a-prize pilot switch 82 is usually passed, among these the 1st-sort starting mouth 65 passes the pattern operation pilot switch 83 specially on the way further. When the specific field detection 77 and the winning-a-prize number detection 76 are specially formed in the interior of the electric accessory 67 and the game sphere which won a prize of the large winning-a-prize mouth 62 passes this specific field detection 77 and the winning-a-prize number detection 76, in the specific field detection 77, continuation of great success is allowed and the winning-a-prize number detection 76 is restricting the winning-a-prize number. If the passage sequence of an ON sphere is memorized, expenditure is performed according to winning-a-prize sequence in expenditure and the winning-a-prize pilot switch 82, the specific field detection 77, and the winning-a-prize number detection 76 usually win a prize of a game visitor with composition characteristic as one of this inventions where, it enables it to distinguish easily how many pieces come out.

[0026] The winning-a-prize processing section 98 prepared in the lower part of the mechanism board 35 which shows the whole is connected to the lower part of the game board 13 by drawing 2, and the game sphere which carried out the ON sphere to each winning-a-prize mouth can gather up by the set board 75, and is guided to winning-a-prize detection equipment 57 from the inclination 81 (this example has made the inclination 6 times) of the winning-a-prize processing section 98. The degree of tilt angle which it was very difficult the degree to gather a game sphere, and for there to be also no **** lump, and to make it align in one train, and was mentioned above will do influence greatly. Although six inclinations are prepared in this example, if this angle is carried out more than this, a **** lump phenomenon will arise, if it is made less than 4 times, this will also flow, speed will fall and a **** lump phenomenon will arise. There is winning-a-prize detection equipment 57 mentioned above in the winning-a-prize processing section 98, and, as for the winning-a-prize detection equipment 57, the winning-a-prize detection motor 79 and the winning-a-prize pilot switch 80 are formed. The pachinko machine's 10 energization of power rotates the winning-a-prize detection motor 79 counterclockwise. Expenditure will be performed, if the sprocket which is connected

[shaft / of the winning-a-prize detection motor 79] and which is not illustrated is loaded with the game sphere guided from the inclination 81 and the winning-a-prize pilot switch 80 detects a game sphere in the middle of rotation. After the sprocket loaded with the game sphere discharges the game sphere with which the position of close awarded-balls ***** which is not illustrated is loaded by stopping to close awarded-balls ***** and expenditure is completed, a sprocket meets rotation again. [0027] If the above-mentioned composition operates a solenoid based on a detecting signal further, is what was carried out to making a winning-a-prize sphere discharge, and requires [the conventional switch detects a winning-a-prize sphere,] expenditure execution, eccrisis of the winning-a-prize sphere following it, and time from a detection result and an inclination 81 is not made into grade 4 times, the exhaust of duck composition will require **** and will cause a malfunction.

Although there was a said fault, the outstanding effect that winning-a-prize detection processing can make it be hard to be influenced of **** since this equipment is body of revolution at high speed is done so. Drawing 5 is the middle plate 86 which attaches the game board 13, and in order to explain the detail of the interior which cannot be explained in drawing 2 , it shows the state where the game board 13 and the mechanism board 35 were removed. The middle plate 86 is constituted in the shape of a window frame, as shown in Arrows 86a-86g, it can insert the game board 13, and since it is a rotatable considering the firm attachment lever 88 as the axis of rotation of the firm attachment shaft 87, if it changes into the state which the game board 13 was set and showed the firm attachment lever 88 in drawing, it can fix it.

[0028] If it pushes in so that it may put into the attaching hole section and the discharge motor firm-attachment position A89 and the discharge motor firm-attachment position B90 may be connected to the front frame 12 which the discharge motor firm attachment position A89 and the discharge motor firm-attachment position B90 are in the middle plate 86, and does not illustrate the detail of a launcher 44 when attaching a launcher 44, an attaching position is fixed, and a launcher 44 can be made to fix to the front frame 12 on the screw which is not illustrated further If it does in this way, when attaching a launcher 44 to the pachinko machine 10, the automatic installation of what was attached by an engineer's hand is attained conventionally. It will operate, if it is put into a microswitch inside at the tooth back of the metal-flask opening detection 99 shown in drawing 1 by the dotted line and a metal flask 18 is closed.

[0029] Drawing 6 shows the electric system concerning this invention. Although drawing 6 shows each part article connection situation, it corresponds to what was mentioned above in drawing and explanation, and it omits a detail except for a particular part. When both the metal-flask opening detection 99 and the front frame opening detection 54 are connected to the game machine control unit and the trouble concerning ON sphere detection of the winning-a-prize number detection 76, specific field detection, the full detector 39, and 1st-sort starting mouth 65 grade

occurs, it can judge easily that the metal-flask opening detection 99 and the front frame opening detection 54 opened wide for the disposal. The sound generator or tone generator accompanied by CPU is built in, and the voice-control section 43 is formed in one with the loudspeaker. The method of operation is JP,9-202190,A, and the applicant gives the detail. Since the partial perspective diagram of the front frame opening detection 54 showed the detail to drawing 2 , drawing 5 , and drawing 6 and the content was described, drawing 7 was illustrated so that structure could be judged. However, it became the form where the upper part was pushed on an outer frame edge, and structure depressed a front frame, and since it is fixed with the outer frame base and the outer frame beam 22, it has the advantage of it becoming impossible to wrench open and **.

[0030] Drawing 8 is the structure perspective diagram of the expenditure equipment 38 shown in drawing 2 by the dotted line. The sprocket is prepared in the interior expenditure equipment 38 is connected to the supply sphere path 96 and which is not illustrated, and this sprocket is connected to the expenditure motor 91. While the awarded-balls number detection 92 and the loan number detection 94 are formed in the periphery section of a sprocket and the loan sphere path 95 is established in the awarded-balls path 93 and the loan number detection 94 on each side at the awarded-balls number detection 92, the outflow place is connected to the upper pan 15. It has been the feature that operation lends out with expenditure of awarded balls by the motor rotation direction, and ecrisis of a sphere supposes that it is possible with one equipment. As mentioned above, although the gestalt of operation of this invention was explained according to the example, it cannot be overemphasized by this invention that it can carry out variously in the range which is not limited to such an example and does not deviate from the summary of this invention.

[Translation done.]

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the transverse-plane perspective diagram of ** and the pachinko machine of an example.

[Drawing 2] It is the rear view of the pachinko machine shown in ** and drawing 1.

[Drawing 3] It is the front view of the game board with which ** and a pachinko machine are loaded.

[Drawing 4] It is drawing which explains the flow and function of a winning-a-prize sphere with the plan of ** and the game board.

[Drawing 5] It is drawing having shown the middle plate which attaches ** and the game board firmly.

[Drawing 6] It is drawing having shown the electric system of ** and a pachinko machine.

[Drawing 7] It is the detail drawing having shown the structure of front frame opening detection of ** and this invention article.

[Drawing 8] It is drawing having shown the expenditure equipment built in ** and the mechanism board.

[Description of Notations]

10 [— A front frame, 13 / — The game board, 14 / — Hinge,] — A pachinko machine, 11 — An outer frame, 12 15 [— A discharge handle, 18 / — A metal flask, 19 / — Top lamp B] — A top pan, 16 — A bottom pan, 17 20 [— An outer frame beam, 23 / — Outer frame base,] — The top lamp A, 21 — A card unit, 22 24 [— Card *****,] — It is pattern display and 25 specially, — A card balance display, 26 27 [— A supply demand display 30 / — Full display,] — Loan ***** , 28 — A touch plate, 29 31 [— A discharge stop button 34 / — Card slot,] — ****, 32 — A loan display, 33 35 [— A tank rail, 38 / — Expenditure equipment,] — The mechanism board, 36 — An awarded-balls tank, 37 39 [— The power amplification section, 42 / — Power supply section,] — A full detector, 40 — A game machine control unit, 41 43 [— A touch inverter, 46 / — Protection lid,] — The voice-control section, 44 — A launcher, 45 47 [— External connection terminal assembly,] — An outer frame latch slider, 48 — A mechanism board firm attachment lever, 49 50 [— Slider latch section,] — A unit code, 51 — Beam reinforcement metallic ornaments, 52 53 [— A grounding terminal, 56 / — Supply demand detection,] — The outer frame latch board, 54 — Front frame opening detection, 55 57 [— A wind-mill lamp, 60 / — Corner lamp,] — Winning-a-prize detection equipment, 58 — A motor control circuit, 59 61 [— A large winning-a-prize mouth lamp, 64 / — Winning-a-prize mouth lamp,] — It is usually a winning-a-prize mouth and 62. — A large winning-a-prize mouth, 63 65 [— It is an electric accessory and 68 specially. / — Usually Electric accessory,] — The 1st-sort starting mouth, 66 — It is usually a starting mouth and 67. 69 [— Aperture winning-a-prize display,] — It is usually pattern ***** and 70. — A **** shortage full display, 71 72 [— A guidance rail, 75 / — Set board,] — Hold display, 73 — A rail protection member, 74 76 [— Specially Pattern display *****,] — Winning-a-

prize number detection, 77 — Specific field detection, 78 79 [— An inclination, 82 / — Usually Winning-a-prize pilot switch,] — A winning-a-prize detection motor, 80 — A winning-a-prize pilot switch, 81 83 [— Exhaust port,] — It is a pattern operation pilot switch and 84 specially. — An out mouth, 85 86 [— A firm attachment lever, 89 / — Discharge motor firm attachment position A] — A middle plate, 87 — A firm attachment shaft, 88 90 [— Awarded-balls number detection, 93 / — An awarded-balls path, 94 / — Loan number detection, 95 / — A loan sphere path, 96 / — A supply sphere path, 97 / — A mechanism control unit, 98 / — The winning-a-prize processing section, 99 / — Metal-flask opening detection.] — The discharge motor firm attachment position B, 91 — An expenditure motor, 92

[Translation done.]

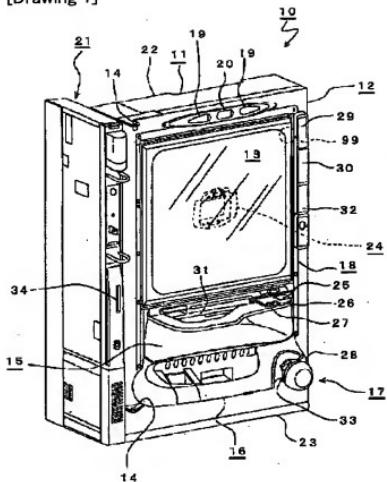
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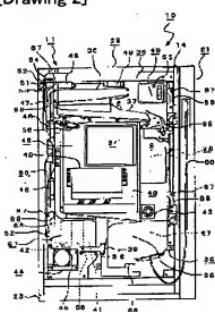
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DRAWINGS

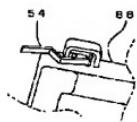
[Drawing 1]



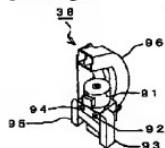
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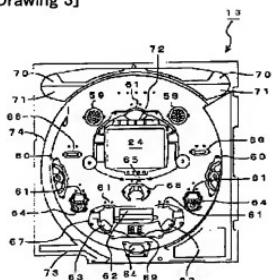
[Drawing 7]



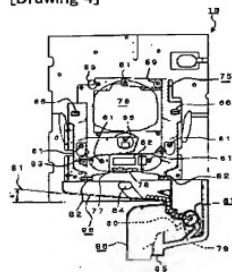
[Drawing 8]



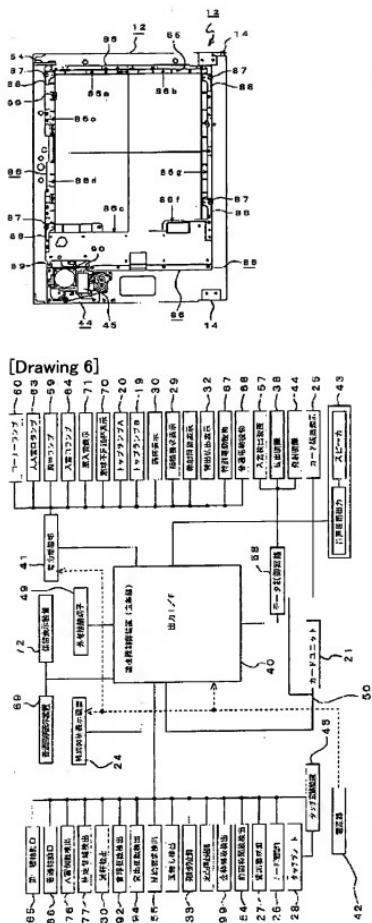
[Drawing 3]



[Drawing 4]



[Drawing 5]



[Translation done.]